

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	811	524/261.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/03 16:43
L2	62	524/261.ccls. and (\$sulfenamide \$sulphenamide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/03 16:43
S1	1	"20040181000"	US-PGPUB; USPAT	OR	ON	2007/05/03 08:57
S2	15	("3655713"   "3697551"   "3813351"   "3947436"   "3957718"   "4143027").PN. OR ("4292234").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/02 17:31
S3	559	(elastomer\$2 rubber\$2).ti. and (\$sulfenamide \$sulphenamide)	DERWENT	OR	ON	2007/05/02 15:10
S4	26	(elastomer\$2 rubber\$2).ti. and (\$sulfenamide \$sulphenamide) with (coupl\$4 adhesion promoter)	DERWENT	OR	ON	2007/05/02 16:39
S5	1	ep-74632-\$.did. fr-2149339-\$.did.	DERWENT	OR	ON	2007/05/02 15:29
S6	1	"20040254269"	US-PGPUB	OR	ON	2007/05/02 15:16
S7	1	2003-229364.NRAN.	DERWENT	OR	ON	2007/05/02 15:28
S8	1	"3997356".pn.	US-PGPUB; USPAT	OR	ON	2007/05/02 15:30
S9	60	("3768537").PN. OR ("3997356").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/02 15:30
S10	134	(elastomer\$2 rubber\$2).ti,ab,clm. and (\$sulfenamide \$sulphenamide) with (coupl\$4 adhesion promoter) and (tire tread)	US-PGPUB; USPAT	OR	ON	2007/05/02 16:40
S11	58	(elastomer\$2 rubber\$2).ti,ab,clm. and (\$sulfenamide \$sulphenamide) with (coupl\$4 adhesion promoter) and (tire tread) not sulfenamide near2 accelerator	US-PGPUB; USPAT	OR	ON	2007/05/02 16:56
S12	2	polysilyl\$ with (\$sulfenamide \$sulphenamide)	US-PGPUB; USPAT	OR	ON	2007/05/02 17:04
S13	1	polysilyl\$ with (\$sulfenamide \$sulphenamide)	DERWENT	OR	ON	2007/05/02 17:14
S14	29	(\$thiosulfenamide \$thiosulphenamide)	US-PGPUB; USPAT	OR	ON	2007/05/02 17:26
S15	3	(polysilyl\$4 poly adj silyl\$4) same (\$sulfenamide \$sulphenamide)	US-PGPUB; USPAT; DERWENT	OR	ON	2007/05/02 17:30
S16	110	araujo-da-silva adj jose-carlos.in. blanchard adj christiane.in. mignani adj gerard.in. pagano adj salvatore.in. tardivat adj jean-claude.in.	US-PGPUB; USPAT	OR	ON	2007/05/02 17:31
S17	7	S16 and (\$sulfenamide \$sulphenamide).clm.	US-PGPUB; USPAT	OR	ON	2007/05/02 17:33
S18	1	"5996663".pn.	US-PGPUB; USPAT	OR	ON	2007/05/02 17:34
S19	221	bis with (\$sulfenamide \$sulphenamide)	US-PGPUB; USPAT	OR	ON	2007/05/02 17:35
S20	194	bis with (\$sulfenamide \$sulphenamide) and (tire tread elastomer\$2 rubber\$2)	US-PGPUB; USPAT	OR	ON	2007/05/02 17:34

## EAST Search History

S21	4	bis with (\$thiosulfenamide \$thiosulphenamide)	US-PGPUB; USPAT	OR	ON	2007/05/02 18:11
S22	1	"20040181000"	US-PGPUB; USPAT	OR	ON	2007/05/02 18:11



# **STIC Search Report**

**EIC 1700**

**STIC Database Tracking Number: 223686**

**TO: Vickey Ronesi**  
**Location: Remsen 10d35**  
**Art Unit : 1714**  
**May 3, 2007**  
**Phone: 571-272-2701**  
**Serial Number: 10 / 733613**

**From: Jan Delaval**

**Location: EIC 1700**  
**Remsen 4a30**  
**Phone: 571-272-2504**  
**jan.delaval@uspto.gov**

## **Search Notes**

**Banks, Kendra**

223686

**From:** VICKEY RONESI [vickey.ronesi@uspto.gov]  
**Sent:** Wednesday, May 02, 2007 4:49 PM  
**To:** STIC-EIC1700  
**Subject:** Database Search Request, Serial Number: 10/733613

Rush

**Requester:**  
VICKEY RONESI (P/1714)  
**Art Unit:**  
GROUP ART UNIT 1714  
**Employee Number:**  
80299  
**Office Location:**  
REM 10D35  
**Phone Number:**  
(571)272-2701  
**Mailbox Number:**

**Case serial number:**  
10/733613  
**Class / Subclass(es):**  
524/261  
**Earliest Priority Filing Date:**  
6/28/01  
**Format preferred for results:**  
Paper  
**Search Topic Information:**  
Please do a structure and text search on formula (I). Thanks!  
**Special Instructions and Other Comments:**

Gar  
5/3/07

## **Banks, Kendra**

---

**From:** Jagannathan, Vasu  
**Sent:** Thursday, May 03, 2007 9:07 AM  
**To:** Fuller, Kathleen; Banks, Kendra  
**Cc:** Ronesi, Vickey  
**Subject:** FW: Database Search Request, Serial Number: 10/733613 (please treat as Rush)

This Vickey's SPE. I would appreciate it if you could treat her search request as a "Rush". The case involved is an amended case due at the end of this biweek. It was assigned to her only yesterday. Thank you.

Vasu Jagannathan  
SPE, Art Unit 1714

-----Original Message-----

**From:** Ronesi, Vickey  
**Sent:** Thursday, May 03, 2007 9:04 AM  
**To:** Jagannathan, Vasu  
**Subject:** FW: Database Search Request, Serial Number: 10/733613

-----Original Message-----

**From:** STIC-EIC1700  
**Sent:** Thursday, May 03, 2007 8:59 AM  
**To:** Ronesi, Vickey  
**Subject:** RE: Database Search Request, Serial Number: 10/733613

Your search request has been received. At this time there is an approximate turn-around time of 7 business days.

Thank you,

---

Mrs. Kendra P. Banks, Technical Information Specialist  
US Patent & Trademark Office  
400 Dulany St., Remsen 4B28  
Alexandria, VA 22314  
(571) 272-2516  
Fax (571) 273-0223

-----Original Message-----

**From:** VICKEY RONESI [mailto:vickey.ronesi@uspto.gov]  
**Sent:** Wednesday, May 02, 2007 4:49 PM  
**To:** STIC-EIC1700  
**Subject:** Database Search Request, Serial Number: 10/733613

**Requester:**  
VICKEY RONESI (P/1714)  
**Art Unit:**  
GROUP ART UNIT 1714  
**Employee Number:**  
80299  
**Office Location:**  
REM 10D35  
**Phone Number:**  
(571)272-2701  
**Mailbox Number:**

Case serial number:

10/733613

Class / Subclass(es):

524/261

Earliest Priority Filing Date:

6/28/01

Format preferred for results:

Paper

Search Topic Information:

Please do a structure and text search on formula (I). Thanks!

Special Instructions and Other Comments:

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:23:02 ON 03 MAY 2007  
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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STRUCTURE FILE UPDATES: 2 MAY 2007 HIGHEST RN 934214-84-3  
DICTIONARY FILE UPDATES: 2 MAY 2007 HIGHEST RN 934214-84-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d sta que l44

L41 57696 SEA FILE=REGISTRY ABB=ON PLU=ON (SI AND S AND N)/ELS  
L42 STR

S-~~X~~S-~~X~~G1-~~X~~N S @5  
1 2 3 4

REP G1=(0-2) 5

NODE ATTRIBUTES:

NSPEC	IS	RC	AT	1
NSPEC	IS	RC	AT	2
NSPEC	IS	RC	AT	4
NSPEC	IS	RC	AT	5

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L44 49 SEA FILE=REGISTRY SUB=L41 SSS FUL L42

100.0% PROCESSED 11391 ITERATIONS

49 ANSWERS

SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 13:27:30 ON 03 MAY 2007)  
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:27:57 ON 03 MAY 2007

L1 1 S US20040181000/PN OR (US2003-733613# OR WO2002-EP6954 OR FR200  
E ARAUJO/AU  
L2 9 S E197,E198  
E ARAUJO J/AU  
E DA SILVA/AU  
L3 2 S E252,E253  
E DASILVA/AU  
E BLANCHARD/AU  
L4 6 S E3  
E BLANCHARD C/AU  
L5 139 S E3-E12,E45  
E MIGNANI/AU  
L6 165 S E12-E14  
E PAGANO/AU  
E PAGANO S/AU  
L7 112 S E3-E6,E8  
E SALAVATORE/AU  
E TARDIVAT/AU  
L8 27 S E4,E6,E7  
E MICHELIN/PA,CS  
L9 556 S E3,E4 OR MICHELIN?/PA,CS  
SEL RN L1

FILE 'REGISTRY' ENTERED AT 13:39:17 ON 03 MAY 2007

L10 16 S E1-E16  
L11 7 S L10 AND (SI AND N AND S)/ELS

FILE 'HCAPLUS' ENTERED AT 13:40:12 ON 03 MAY 2007

L12 435 S L2-L8 NOT L1  
L13 26 S L12 AND (TIRE OR TYRE)  
L14 25 S L12 AND B60C/IPC,IC,ICM,ICS  
L15 47 S L12 AND (?ELASTOMER? OR ?RUBBER?)  
L16 43 S L12 AND (ELASTOMER? OR RUBBER?)/SC,SX  
E RUBBER/CT  
E E3+ALL  
L17 6 S E7  
L18 287189 S E6+NT  
E E57+ALL  
L19 23263 S E1+NT  
L20 45 S L12 AND L17-L19  
L21 48 S L13-L16,L20  
L22 387 S L12 NOT L21

FILE 'HCAPLUS' ENTERED AT 13:42:42 ON 03 MAY 2007

FILE 'REGISTRY' ENTERED AT 13:42:55 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:42:56 ON 03 MAY 2007

L23 TRA L21 1- RN : 302 TERMS

FILE 'REGISTRY' ENTERED AT 13:42:56 ON 03 MAY 2007

L24 302 SEA L23  
L25 17 S L24 AND (SI AND N AND S)/ELS

FILE 'HCAPLUS' ENTERED AT 13:43:29 ON 03 MAY 2007

L26 TRA L22 1- RN : 1885 TERMS

FILE 'REGISTRY' ENTERED AT 13:43:39 ON 03 MAY 2007

L27 1885 SEA L26  
L28 10 S L27 AND (SI AND N AND S)/ELS



FILE 'HCAPLUS' ENTERED AT 13:44:07 ON 03 MAY 2007  
 L29 528 S L9 NOT L1,L21,L22

FILE 'REGISTRY' ENTERED AT 13:44:10 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:44:13 ON 03 MAY 2007  
 L30 TRA L29 1- RN : 849 TERMS

FILE 'REGISTRY' ENTERED AT 13:44:26 ON 03 MAY 2007  
 L31 849 SEA L30  
 L32 2 S L31 AND (SI AND N AND S)/ELS  
 L33 29 S L11,L25,L28,L32  
 L34 9 S L33 AND SI>=2  
 L35 6 S L34 NOT (C25H49NO9S2SI2 OR C18H20N2SSI2 OR C20H41NO7S2SI2)  
 L36 20 S L33 NOT L34  
 L37 19 S L36 NOT AYS/CI  
 L38 1 S L11 NOT L35  
 L39 10 S L25 NOT L10  
 L40 11 S L38,L39  
 L41 57696 S (SI AND S AND N)/ELS  
 L42 STR  
 L43 3 S L42 SAM SUB=L41  
 L44 49 S L42 FUL SUB=L41  
 SAV L44 RONESI733/A  
 L45 34 S L44 NOT L35,L40  
 L46 11 S L45 AND SI>=2  
 L47 51 S L35,L40,L44  
 L48 2 S L47 NOT L44

FILE 'HCAPLUS' ENTERED AT 13:54:58 ON 03 MAY 2007  
 L49 39 S L47 OR L48  
 L50 6 S L49 AND L1-L9  
 E BLANCHARD C/AU  
 L51 155 S E3-E12,E42-E48,E52  
 L52 3 S L49 AND L51  
 L53 6 S L50,L52  
 L54 21 S L49 AND PY<=2001 NOT P/DT  
 L55 12 S L49 AND (PD<=20010628 OR PRD<=20010628 OR AD<=20010628) AND P  
 L56 33 S L54,L55  
 L57 8 S L56 AND L17-L19  
 L58 6 S L56 AND B60C/IPC,IC,ICM,ICS  
 E TIRE/CT  
 L59 21242 S E5-E21  
 L60 23263 S E5+OLD,NT OR E9+OLD,NT  
 E E5+ALL  
 E E4+ALL  
 L61 23263 S E1 OR E3+OLD,NT OR E4+OLD,NT  
 E E5+ALL  
 L62 287194 S E6+OLD,NT  
 E E30+ALL  
 E E8+OLD  
 L63 9822 S E1,E2  
 E E1+ALL  
 L64 20319 S E358+OLD,NT  
 L65 8 S L56 AND L59-L64  
 L66 368610 S (RUBBER? OR ELASTOMER?)/CW,CT  
 E BUTADIENE/CT  
 L67 9822 S E11+OLD,NT  
 E BUTADIENE RUBBERS/CT

L68           9678 S E BUTADIENE RUBBER,/CT  
              E STYRENE-BUTADIENE RUBBER/CT  
L69           20319 S E3+OLD  
L70           20187 S E3+NT  
              E STYRENE-BUTADIENE RUBBER,/CT  
L71           20115 S E4-E12  
L72           8 S L56 AND L66-L71  
L73           8 S L56 AND (RUBBER? OR ELASTOM?)/SC,SX,CW,CT  
L74           10 S L56 AND (?RUBBER? OR ?ELASTOM?)  
L75           6 S L56 AND (TIRE OR TYRE)  
L76           10 S L1,L57,L58,L65,L72-L75  
L77           5 S L76 AND COUPLING?/CW,CT  
              E COUPLING/CT  
L78           5 S L76 AND E5+OLD,NT  
L79           6 S L76 AND COUPL?  
L80           10 S L76-L79  
L81           10 S L80 AND L1-L9,L12-L22,L49-L80  
L82           23 S L56 NOT L81

FILE 'REGISTRY' ENTERED AT 14:09:16 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 14:09:16 ON 03 MAY 2007

L83           TRA L81 1- RN :           265 TERMS

FILE 'REGISTRY' ENTERED AT 14:09:16 ON 03 MAY 2007

L84           265 SEA L83  
L85           8 S L84 AND L47,L48  
L86           83 S L84 AND L41 NOT L85

FILE 'HCAPLUS' ENTERED AT 14:11:27 ON 03 MAY 2007

L87           TRA L82 1- RN :           241 TERMS

FILE 'REGISTRY' ENTERED AT 14:11:27 ON 03 MAY 2007

L88           241 SEA L87  
L89           31 S L88 AND L47,L48  
L90           1 S L89 AND C6H20N2O6S2SI2  
L91           1 S L89 AND C24H54F2N2S2SI2  
L92           1 S L89 AND C24H54F2N2S3SI2  
L93           3 S L90-L92

FILE 'HCAPLUS' ENTERED AT 14:14:54 ON 03 MAY 2007

L94           4 S L93  
L95           4 S L94 AND PY<=2001 NOT P/DT  
L96           13 S L81,L85  
L97           0 S L85 NOT L96

FILE 'REGISTRY' ENTERED AT 14:15:50 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 14:16:08 ON 03 MAY 2007  
SEL HIT RN L81

FILE 'REGISTRY' ENTERED AT 14:18:05 ON 03 MAY 2007

L98           8 S E1-E8  
L99           7 S L98 NOT NCSC2-C6/ES  
L100          6 S L99 NOT NC4-C6/ES

FILE 'HCAPLUS' ENTERED AT 14:18:41 ON 03 MAY 2007

L101          2 S L100  
L102          4 S L95

L103 2 S L101,L102 AND L1-L9,L51  
 L104 1 S L101,L102 AND B60C/IPC,IC,ICM,ICS  
 L105 1 S L101,L102 AND (TYRE OR TIRE)  
 L106 2 S L101,L102 AND (ELASTOM? OR RUBBER?)/SC,SX,CW,CT,BI  
 L107 2 S L101,L102 AND (?ELASTOM? OR ?RUBBER?)  
 L108 2 S L101,L102 AND L59-L64,L66-L71  
 L109 6 S L101-L108

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=> fil hcaplus

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FILE COVERS 1907 - 3 May 2007 VOL ISS

FILE LAST UPDATED: 2 May 2007 (20070502/ED)

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FILE COVERS 1907 - 3 May 2007 VOL 146 ISS 19

FILE LAST UPDATED: 1 May 2007 (20070501/ED)

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This file contains CAS Registry Numbers for easy and accurate

=> d l109 bib abs hitind hitstr retable tot

L109 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:22952 HCAPLUS

DN 138:91239

TI **Rubber** composition for **tire** comprising a coupling agent with polythiosulfenamide function

IN **Araujo-da-Silva, Jose-Carlos; Blanchard, Christiane; Mignani, Gerard; Pagano, Salvatore; Tardivat, Jean-Claude**

PA Societe de Technologie Michelin, Fr.; Michelin Recherche et Technique S.A.

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003002653	A1	20030109	WO 2002-EP6954	20020624 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				

*Instant App.*

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002352627 A1 20030303 AU 2002-352627 20020624 <--  
 EP 1409581 A1 20040421 EP 2002-751063 20020624 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

CN 1522277 A 20040818 CN 2002-813075 20020624 <--  
 JP 2004533522 T 20041104 JP 2003-509027 20020624 <--  
 US 2004181000 A1 20040916 US 2003-733613 20031211 <--  
 PRAI FR 2001-8786 A 20010628 <--  
 WO 2002-EP6954 W 20020624 <--

OS MARPAT 138:91239

AB The invention concerns an **elastomeric** composition useful for producing **tires**, based on at least: (i) a diene **elastomer**, (ii) an inorg. filler as reinforcing filler and (iii) as coupling agent (inorg. filler/diene **elastomer**), a polysilylated organosilicon compound with at least with two functions capable of being grafted on the **elastomer** via SiASxNR1R2 groups, wherein A is a divalent binding group, linear or branched, enabling the polysulfenamide group to be bound to a first silicon atom of the organosilicon compound; x is an integer or fractional number from 2 to 4; R1 represents hydrogen, a monovalent hydrocarbon group or R2; R2 represents the group BSi, wherein: B is a divalent binding group, linear or branched; Si represents a second silicon atom of the organosilicon compound. A typical coupling agent was manufactured by adding 100 mmol HS(CH2)3Si(OMe)3 and Et3N in Et2O in 1 h to Et2O containing 100 mmol SCl2 at -78°, stirring 1 h at -78°, and adding 110 mmol HS(CH2)3Si(OEt)3 and 100 mmol Et3N in Et2O in 1 h.

IC ICM C08K0013-02  
 ICS C08L0021-00; C07F0007-00; **B60C0001-00**; C08J0003-00; C08K0013-02; C08K0003-36; C08K0005-548

CC 39-13 (Synthetic **Elastomers** and Natural **Rubber**)  
 Section cross-reference(s): 29

ST silane polythiosulfenamide deriv coupling agent **rubber tire**; trimethoxysilylpropyldithio triethoxysilylpropylamine manuf coupling agent **rubber tire**

IT **Butadiene rubber, uses**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (of cis-1,4-configuration; **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)

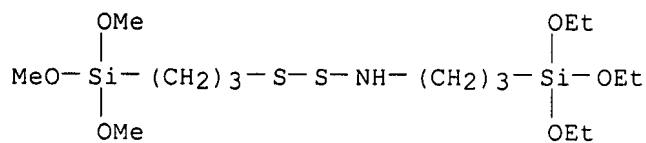
IT Coupling agents  
**Tires**  
 (**rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)

IT Silanes  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)

IT **Styrene-butadiene rubber, uses**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (**rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)

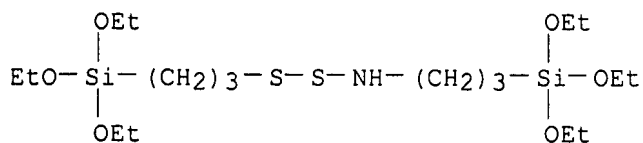
IT Amides, preparation  
 Sulfenyl compounds  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (sulfenamides, polythio-; **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 9003-17-2  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (butadiene **rubber**, of cis-1,4-configuration; **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 54974-07-1P, Phthalimidosulfenyl chloride 482593-59-9P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (coupling agent precursor; **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 108-91-8, Cyclohexylamine, reactions 919-30-2, 3-(Triethoxysilyl)propylamine 3069-25-8, N-Methyl[3-(trimethoxysilyl)propyl]amine 4420-74-0, 3-Mercaptopropyltrimethoxysilane 14814-09-6, 3-Mercaptopropyltriethoxysilane 117226-79-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coupling agent precursor; **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 482593-46-4P, N-(3-(Trimethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-48-6P, N-(3-(Triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-50-0P, N,N-Bis(3-(trimethoxysilyl)propyl)dithio)cyclohexylamine 482593-52-2P, N,N-Bis(3-(triethoxysilyl)propyl)dithio)cyclohexylamine 482593-53-3P 482593-55-5P, N-Methyl-N-(3-(triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 9003-55-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene **rubber**, **rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- IT 482593-46-4P, N-(3-(Trimethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-48-6P, N-(3-(Triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-50-0P, N,N-Bis(3-(trimethoxysilyl)propyl)dithio)cyclohexylamine 482593-52-2P, N,N-Bis(3-(triethoxysilyl)propyl)dithio)cyclohexylamine 482593-53-3P 482593-55-5P, N-Methyl-N-(3-(triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**rubber** compns. for **tire** containing silane coupling agents with polythiosulfenamide functions)
- RN 482593-46-4 HCAPLUS  
 CN 1-Propanamine, 3-(triethoxysilyl)-N-[[3-(trimethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



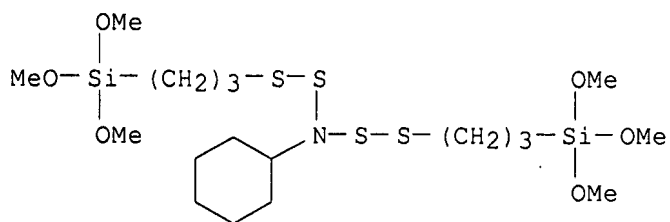
RN 482593-48-6 HCAPLUS

1-Propanamine, 3-(triethoxysilyl)-N-[[3-(triethoxysilyl)propyl]dithio]-  
(9CI) (CA INDEX NAME)



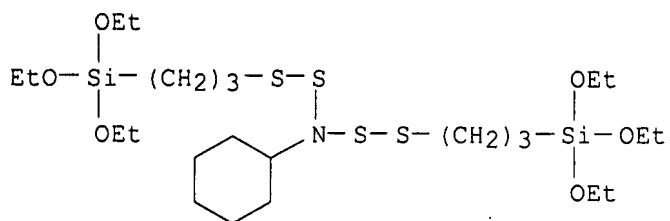
RN 482593-50-0 HCAPLUS

CN	Cyclohexanamine, N,N-bis[[3-(trimethoxysilyl)propyl]dithio]- (9CI)	(CA INDEX NAME)
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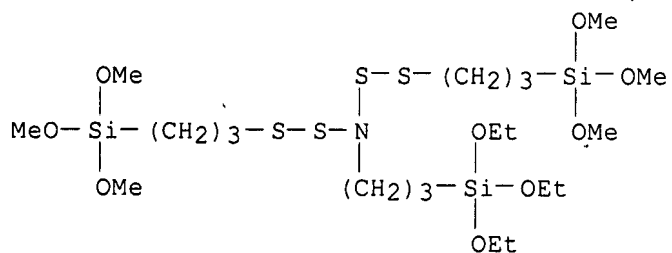
RN 482593-52-2 HCAPLUS

CN	Cyclohexanamine, N,N-bis[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)	
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RN 482593-53-3 HCAPLUS

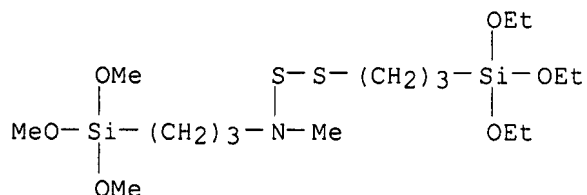
CN 1-Propanamine, 3-(triethoxysilyl)-N,N-bis[[3-(trimethoxysilyl)propyl]dithio-  
o]- (9CI) (CA INDEX NAME)



RN 482593-55-5 HCAPLUS

CN 1-Propanamine, N-methyl-N-[[3-(triethoxysilyl)propyl]dithio]-3-

(trimethoxysilyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bayer Ag	2000			EP 1063259 A	HCAPLUS
Goodyear Tire & Rubber	1999			EP 0945456 A	HCAPLUS
Phillips Petroleum Co	1983			EP 0074632 A	HCAPLUS
Scholl, T	1998			US 5827912 A	

L109 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:22887 HCAPLUS

DN 138:91225

TI Organosilanes having polythiosulfenamide groups that can be used as coupling agents

IN Barruel, Pierre; Guennouni, Nathalie; Kirsch, Gilbert; **Mignani, Gerard**

PA Rhodia Chimie, Fr.

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003002574	A1	20030109	WO 2002-FR2229	20020627
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2826655	A1	20030103	FR 2001-8528	20010628
	FR 2826655	B1	20030822		
	AU 2002319385	A1	20030303	AU 2002-319385	20020627
	EP 1399451	A1	20040324	EP 2002-748970	20020627
	EP 1399451	B1	20060315		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 320437	T	20060415	AT 2002-748970	20020627
	<del>US 2004254269</del>	A1	20041216	US 2004-482152	20040803
PRAI	FR 2001-8528	A	20010628		
	WO 2002-FR2229	W	20020627		

AB The invention relates to organosilicon compds. selected from polysilylated organosilicon compds. bearing R1SxNR2R3 groups, wherein R1 is a divalent radical, x is 2-4, R2 and R3 are H, organic, or SaR4Si.tplbond., wherein R4

is R1, Si.tplbond. is a silicon atom bonded to R1. Said compds. can be used as white filler/**elastomer** coupling agents in diene **rubber** compns. comprising, by way of reinforcing filler, a white filler such as a siliceous material. A typical coupling agent was manufactured by adding 100 mmol HS(CH<sub>2</sub>)<sub>3</sub>Si(OMe)<sub>3</sub> and Et<sub>3</sub>N in Et<sub>2</sub>O in 1 h to Et<sub>2</sub>O containing 100 mmol SCl<sub>2</sub> at -78°, stirring 1 h at -78°, and adding 110 mmol HS(CH<sub>2</sub>)<sub>3</sub>Si(OEt)<sub>3</sub> and 100 mmol Et<sub>3</sub>N in Et<sub>2</sub>O in 1 h.

- IC ICM C07F0007-18
- ICS C08K0005-54; C08C0019-26; C08C0019-42
- CC 39-9 (Synthetic **Elastomers** and Natural **Rubber**)  
Section cross-reference(s): 29
- ST silane polythiosulfenamide deriv coupling agent silica filled **rubber**; trimethoxysilylpropyldithio triethoxysilylpropylamine manuf coupling agent silica filled **rubber**
- IT **Styrene-butadiene rubber, uses**  
RL: POF (Polymer in formulation); USES (Uses)  
(SBR 1502; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT **Natural rubber, uses**  
RL: POF (Polymer in formulation); USES (Uses)  
(SMR 5L; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT **Synthetic rubber, uses**  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene-isoprene-styrene; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT **Synthetic rubber, uses**  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene-isoprene; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Amines, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling agent precursors; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Control apparatus  
(elec., **rubber** joints; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Joints, mechanical  
(**rubber** joints of elec. control apparatus; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Engines  
(**rubber** mounts; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Electric cables  
(sheaths; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Coupling agents  
(silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT **Butadiene rubber, uses**  
Butyl rubber, uses  
Isoprene rubber, uses  
Isoprene-styrene rubber  
Nitrile rubber, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Shoes



- (soles; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT Amides, preparation  
Sulfenyl compounds  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(sulfenamides, polythio-; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 9003-17-2  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene **rubber**, silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 9010-85-9  
RL: POF (Polymer in formulation); USES (Uses)  
(butyl **rubber**, silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 54974-07-1P, Phthalimidodisulfenyl chloride 482593-59-9P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(coupling agent precursor; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 108-91-8, Cyclohexylamine, reactions 919-30-2, 3-  
(Triethoxysilyl)propylamine 3069-25-8, N-Methyl[3-(trimethoxysilyl)propyl]amine 4420-74-0, 3-Mercaptopropyltrimethoxysilane 14814-09-6, 3-Mercaptopropyltriethoxysilane 117226-79-6, Phthalimide disulfide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling agent precursor; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 9003-31-0  
RL: POF (Polymer in formulation); USES (Uses)  
(isoprene **rubber**, silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 25038-32-8  
RL: POF (Polymer in formulation); USES (Uses)  
(isoprene-styrene **rubber**, silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 9003-18-3  
RL: POF (Polymer in formulation); USES (Uses)  
(nitrile **rubber**, silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 25102-52-7, 1,3-Butadiene-isoprene copolymer 26602-62-0, 1,3-Butadiene-isoprene-styrene copolymer  
RL: POF (Polymer in formulation); USES (Uses)  
(**rubber**; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 482593-46-4P, N-(3-(Trimethoxysilyl)propyldithio)-3-(triethoxysilyl)propylamine 482593-48-6P, N-(3-(Triethoxysilyl)propyldithio)-3-(triethoxysilyl)propylamine 482593-50-0P, N,N-Bis(3-(trimethoxysilyl)propyldithio)cyclohexylamine 482593-52-2P, N,N-Bis(3-(triethoxysilyl)propyldithio)cyclohexylamine 482593-53-3P 482593-55-5P, N-Methyl-N-(3-(triethoxysilyl)propyldithio)-3-(triethoxysilyl)propylamine  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)
- IT 1344-28-1, Alumina, uses  
RL: MOA (Modifier or additive use); USES (Uses)

(silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)

IT 9003-55-8

RL: POF (Polymer in formulation); USES (Uses)

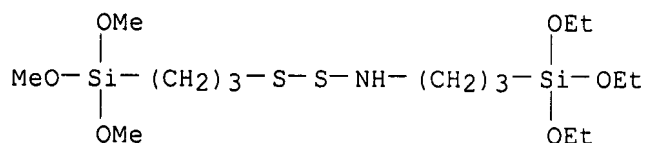
(styrene-butadiene **rubber**, SBR 1502; silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)

IT 482593-46-4P, N-(3-(Trimethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-48-6P, N-(3-(Triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine 482593-50-0P, N,N-Bis(3-(trimethoxysilyl)propyl)dithio)cyclohexylamine 482593-52-2P, N,N-Bis(3-(triethoxysilyl)propyl)dithio)cyclohexylamine 482593-53-3P 482593-55-5P, N-Methyl-N-(3-(triethoxysilyl)propyl)dithio)-3-(triethoxysilyl)propylamine  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(silanes with polythiosulfenamide functions for coupling agents for **rubbers** containing white fillers)

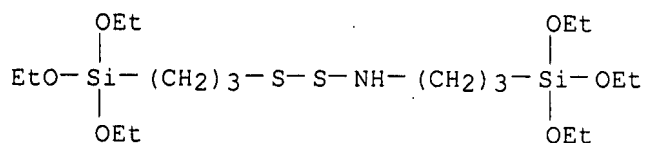
RN 482593-46-4 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)-N-[[3-(trimethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



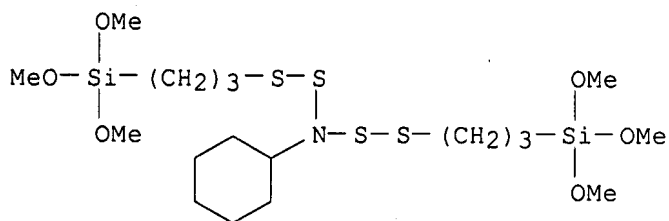
RN 482593-48-6 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)-N-[[3-(triethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



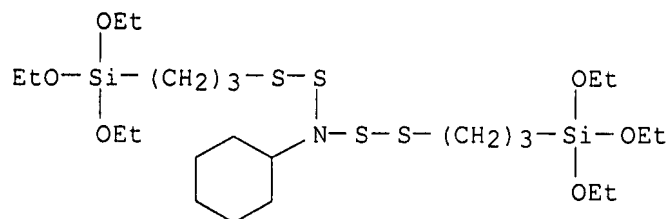
RN 482593-50-0 HCAPLUS

CN Cyclohexanamine, N,N-bis[[3-(trimethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



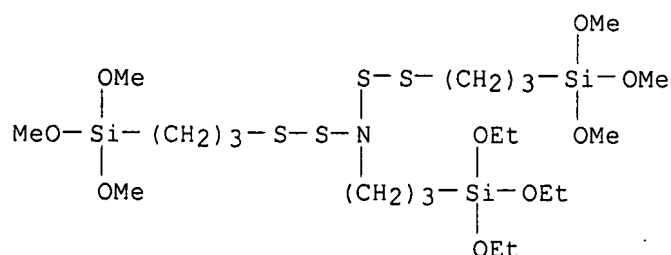
RN 482593-52-2 HCAPLUS

CN Cyclohexanamine, N,N-bis[[3-(triethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



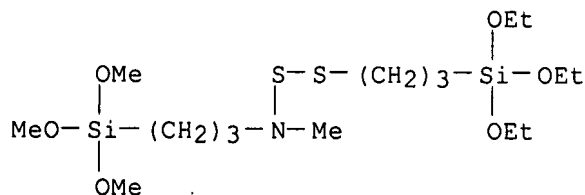
RN 482593-53-3 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)-N,N-bis[[3-(trimethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



RN 482593-55-5 HCAPLUS

CN 1-Propanamine, N-methyl-N-[[3-(triethoxysilyl)propyl]dithio]-3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Deutsche Gold- Und Silb	1973			FR 2149339 A	HCAPLUS
Phillips Petroleum Co	1983			EP 0074632 A	HCAPLUS

L109 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:887183 HCAPLUS

DN 138:125167

TI Reaction ability of heterochain complex-forming organo polymeric and organosilicon S-, N-containing sorbents toward noble metals

AU Murinov, Yuri I.; Anpilogova, Galina R.

CS Institute of Organic Chemistry, Ufa Scientific Center, Russian Academy of Sciences, Bashkortostan, 450054, Russia

SO ARKIVOC (Gainesville, FL, United States) [online computer file] (

2001), (9), 166-186

CODEN: AGFUAR

URL: <http://www.arkat-usa.org/ark/journal/Volume2/Part3/Voronkov/MV-261F/261F.pdf>

PB Arkat USA Inc.

DT Journal; (online computer file)

LA English

AB Organopolymeric and organosilicon heterochain complex-forming sorbents containing aliphaticthioether and/or weakly basic amino groups or the complex selective anal. groups are highly effective sorbents for selective recovery and concentration of noble metals. They are characterized by high distribution coeffs. and sorption capacity for noble metals due to a high concentration of functional groups in the polymeric chain. The mechanism of sorption of some noble metals from HCl solns. (Pd (II), Pt (IV), Rh (III), Au(III)) and HNO<sub>3</sub> solns. (Pd (II), Ag (I)) by heterochain sorbents of net, linear and cyclic structure is discussed. The mechanism of interaction of the metals ions with functional groups of the sorbents and type of generated sorption complexes are defined by the nature of electron-donor atoms and metal, by the structure of the functional groups and their state depending on the acidity of solution, by equilibrium of complexation and hydrolysis of complex metal forms in solution as well by the composition of solution

Selectivity and the rows of sorption affinity of S-, S,O- and S,N-containing sorbents are in agreement with the concept of hard and soft acids and bases.

CC 54-2 (Extractive Metallurgy)

IT 11106-30-2, EDE 10P 24938-55-4, Poly(thiomethylene) 25085-17-0, Epichlorohydrin-diethylenetriamine copolymer 89884-12-8D, alkaline hydrolysis of macrothiocyclane **175482-32-3** 189393-61-1 269404-79-7 490030-26-7, Aminoethylpiperazine-formaldehyde-hydrogen sulfide copolymer 490030-28-9

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(heterochain complex-forming organo polymeric and organosilicon S-, N-containing sorbents for recovery of noble metals)

IT **175482-32-3**

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(heterochain complex-forming organo polymeric and organosilicon S-, N-containing sorbents for recovery of noble metals)

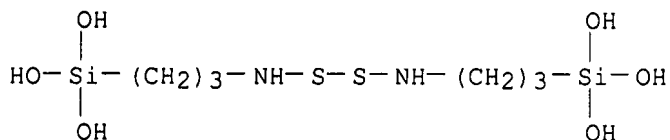
RN 175482-32-3 HCAPLUS

CN 6,7-Dithia-5,8-diaza-1,12-disiladodecane-1,1,1,12,12,12-hexol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 175482-31-2

CMF C6 H20 N2 O6 S2 Si2



# RETABLE

Referenced Author (RAU)	Year   VOL   PG   Referenced Work (RPY)   (RVL)   (RPG)   (RWK)	Referenced File
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=====+=====+=====+=====+=====+=====					
Afzaletdinova, N	1987	32	2757	Zh Neorgan Khim	HCAPLUS
Alimarin, I	1985		5	Teoriya i Praktika E	HCAPLUS
Alimarin, I	1991	46	695	Zh Analit Khim	HCAPLUS
Anpilogova, G	1995	40	466	Zh Neorgan Khim	HCAPLUS
Anpilogova, G	1996	41	447	Zh Neorgan Khim	HCAPLUS
Anpilogova, G	1995	12	1969	Zh Prikl Khim	
Anpilogova, G	1998	71	1286	Zh Prikl Khim	HCAPLUS
Anpilogova, G	1998	71	1291	Zh Prikl Khim	HCAPLUS
Anpilogova, G	1998	71	1791	Zh Prikl Khim	HCAPLUS
Jassen, M	1961	17	475	Spectrochim Acta	
Kantipuly, C	1990	37	491	Talanta	HCAPLUS
Kazanova, N	1988	14	1054	Koordinats Khim	HCAPLUS
Kokotov, Y	1970			Ravnovesie i kinetik	
Kukushkin, Y	1985			Khimiya koordinatsio	
Kukushkin, Y	1987			Reaktsionnaya sposo	
Kuz'min, N	1988			Kontsentrirovanie sl	
Lindoi, L	1969	4	41	Coord Chem Rev	
Lisichkin, G	1986			Modifitsirovannie kr	
Malofeeva, G	1988	31	3	Izv Vissh Uchebn Zav	HCAPLUS
Murinov, Y	1993			Ekstraktsiya metallov	
Petrukhin, O	1985		246	Teoriya i Praktika E	HCAPLUS
Polovinkina, G	1989	62	337	Zh Prikl Khim	HCAPLUS
Sibirskaya, V	1978	4	963	Koordinats Khim	HCAPLUS
Simanova, S	1987		51	Problemi sovremennoy	
Tolstikov, G	1984	20	88	Zh Organ Khim	HCAPLUS
Voronkov, M.	1991	320	658	Dokl AN SSSR	HCAPLUS
Voronkov, M	1998	68	817	Zh Obsh Khim	
Voronkov, M	1996	69	705	Zh Prikl Khim	HCAPLUS
Ya, A	1971	A5	969	J Macromol Sci Chem	

L109 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:136929 HCAPLUS

DN 128:181181

TI Copper(II) sorption by organosilicon polymers

AU Anon.

CS Russia

SO Zhurnal Prikladnoi Khimii (Sankt-Peterburg) (1997), 70(10),  
1612-1614

CODEN: ZPKHAB; ISSN: 0044-4618

PB Nauka

DT Journal

LA Russian

AB Sorption of copper by poly(3-silsesquioxanylpropylthioacetamide) and  
poly[bis-S,S'(3-silsesquioxanylpropylamino)disulfide] was studied.  
Silsesquioxanes exhibited good sorption properties in strong acidic media.

CC 38-3 (Plastics Fabrication and Uses)

IT 7440-50-8, Copper, properties 175482-32-3 203248-16-2  
203342-25-0

RL: PRP (Properties)

(copper(II) sorption by silsesquioxanes)

IT 175482-32-3

RL: PRP (Properties)

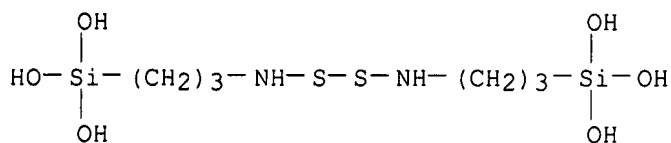
(copper(II) sorption by silsesquioxanes)

RN 175482-32-3 HCAPLUS

CN 6,7-Dithia-5,8-diaza-1,12-disiladodecane-1,1,1,12,12,12-hexol, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

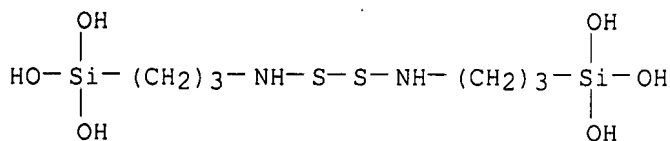
CRN 175482-31-2  
CMF C6 H20 N2 O6 S2 Si2



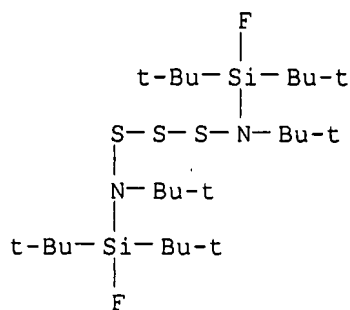
L109 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 1996:202349 HCAPLUS  
DN 124:319007  
TI Silver sorption from nitric acid and thiosulfate solutions by  
carbofunctional polyorganylsilsesquioxanes  
AU Pozhidaev, Yu. N.; Palam, B.; Zhila, G. Yu.; Kirillov, A. I.; Vlasova, N.  
N.; Voronkov, M. G.  
CS Irkutsk. Inst. Org. Khim., Irkutsk, Russia  
SO Zhurnal Prikladnoi Khimii (Sankt-Peterburg) (1995), 68(11),  
1788-91  
CODEN: ZPKHAB; ISSN: 0044-4618  
PB Nauka  
DT Journal  
LA Russian  
AB Sorption of Ag (I) from HNO3 and thiosulfate solns. by  
poly[S,S'-bis(3-silsesquioxanylpropylamino)disulfide] (I) and  
poly(mercaptoethylsilsesquioxane) (II) was studied. Highest sorption  
ability exhibit I sorbent in HNO3 and II sorbent in thiosulfate. A  
possibility of regeneration of Ag from thiosulfate materials of  
photomaterials is shown.  
CC 38-3 (Plastics Fabrication and Uses)  
IT 7440-22-4, Silver, properties 175482-30-1 175482-32-3  
176551-09-0  
RL: PRP (Properties)  
(silver sorption from nitric acid and thiosulfate solns. by  
carbofunctional polyorganylsilsesquioxanes)  
IT 175482-32-3  
RL: PRP (Properties)  
(silver sorption from nitric acid and thiosulfate solns. by  
carbofunctional polyorganylsilsesquioxanes)  
RN 175482-32-3 HCAPLUS  
CN 6,7-Dithia-5,8-diaza-1,12-disiladodecane-1,1,1,12,12,12-hexol, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

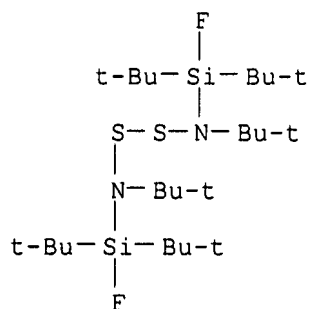
CRN 175482-31-2  
CMF C6 H20 N2 O6 S2 Si2



L109 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1992:41533 HCAPLUS  
 DN 116:41533  
 TI 1,3-Bis[tert-butyl(di-tert-butylfluorosilyl)amino]trisulfane - a compound  
 with FSinSSNSiF helix  
 AU Klingebiel, Uwe; Pauer, Frank; Sheldrick, George M.; Stalke, Dietmar  
 CS Inst. Anorg. Chem., Univ. Goettingen, Goettingen, W-3400, Germany  
 SO Chemische Berichte (1991), 124(12), 2651-3  
 CODEN: CHBEAM; ISSN: 0009-2940  
 DT Journal  
 LA German  
 OS CASREACT 116:41533  
 AB Reaction of lithiated tert-butyl(di-tert-butylfluorofluorosilyl)amine,  
 R<sub>2</sub>SiFNRLi (R = CMe<sub>3</sub> throughout this abstract), with S<sub>8</sub> or Se in THF-hexane  
 gave R<sub>2</sub>SiFNRSnNRSiR<sub>2</sub>F (I, n = 2, 3) and R<sub>2</sub>SiFNRSenNRSiR<sub>2</sub>F resp. The  
 crystal structure of I (n = 3) was determined  
 CC 29-6 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 75  
 IT 135740-64-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and crystal structure of)  
 IT 135740-63-5P 135740-65-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 135740-64-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and crystal structure of)  
 RN 135740-64-6 HCAPLUS  
 CN Silanamine, N,N'-trithiobis[N,1,1-tris(1,1-dimethylethyl)-1-fluoro- (9CI)  
 (CA INDEX NAME)



IT 135740-63-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 135740-63-5 HCAPLUS  
 CN Silanamine, N,N'-dithiobis[N,1,1-tris(1,1-dimethylethyl)-1-fluoro- (9CI)  
 (CA INDEX NAME)



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L110 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:931434 HCAPLUS

DN 139:382665

TI Rubber composition for tires containing a coupling agent with polythiobenzothiazyl function

IN Araujo Da Silva, Jose Carlos; Blanchard, Christine; Mignani, Gerard; Pagano, Salvatore; Tardivat, Jean-claude

PA Societe De Technologie Michelin, Fr.; Michelin Recherche Et Technique S.A

SO PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

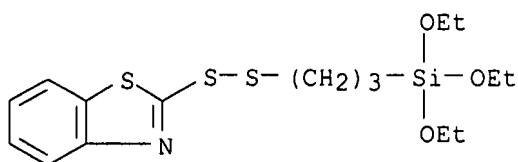
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003097734	A1	20031127	WO 2003-EP4765	20030507
	W:				
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	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003233302	A1	20031202	AU 2003-233302	20030507
	EP 1511800	A1	20050309	EP 2003-727445	20030507
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	FR 2002-6054	A	20020515		
	WO 2003-EP4765	W	20030507		

AB The invention concerns an elastomer composition for use in making tires, based on at least (i) a diene elastomer, (ii) an inorg. filler as reinforcing filler and (iii) as coupling agent (inorg. filler/diene elastomer), one organosilicon compound having at least two functions capable of being grafted on the elastomer by means of a sulfur-containing group with polythiobenzothiazyl function, of formula (I): SiZSxBzt,(AA)y, wherein: Z is a linear or branched divalent binding group for binding the polythiobenzothiazyl group with a silicon atom of the organosilicon



compound; x is a whole or fractional number from 2 to 4; Bzt represents the 2-benzothiazole group, optionally substituted; AA represents an oxygenated organic or mineral monoacid or a polyacid, whereof at least one of the acid functions exhibits constant ionization in water, pKa, at 25 °C, higher than 3; y is a whole or fractional number other than 0 and not greater than 3.

IC ICM C08K0005-47  
ICS C08K0005-548; B60C0001-00  
CC 39-13 (Synthetic Elastomers and Natural Rubber)  
IT **173176-00-6P**, 1-(2-Benzothiazolyl)-2-[3-(triethoxysilyl)propyl] disulfide  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (rubber composition for tires containing silane coupling agents with polythiobenzothiazyl functions and oxygenated acids)  
IT **173176-00-6P**, 1-(2-Benzothiazolyl)-2-[3-(triethoxysilyl)propyl] disulfide  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (rubber composition for tires containing silane coupling agents with polythiobenzothiazyl functions and oxygenated acids)  
RN 173176-00-6 HCAPLUS  
CN Benzothiazole, 2-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bridgestone Corp	1991			EP 0447066 A	HCAPLUS
Edme, M	1998			US 5760110 A	HCAPLUS
Hermann-Josef, W	1996			US 5569721 A	HCAPLUS

L110 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:914237 HCAPLUS

DN 139:382647

TI Organosilane-oxygen-containing acid mixtures usable as coupling agents, elastomeric compositions containing them, and elastomeric articles prepared from such compositions

IN Guennouni, Nathalie; Kirsch, Gilbert; Mignani, Gerard

PA Rhodia Chimie, Fr.

SO Fr. Demande, 38 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2839720	A1	20031121	FR 2002-5982	20020515
FR 2839720	B1	20050722		
PRAI FR 2002-5982		20020515		

AB Mixts. containing 1 part silane having OH or hydrolyzable groups and BztSx groups [x = 2-4, Bzt = (substituted) benzothiazyl] [e.g., 2-(3-triethoxysilylpropyldithio)-2-benzothiazole] and ≤3 parts O-containing organic or mineral acid (e.g., stearic acid) are useful as coupling agents in rubbers containing white fillers.

IC ICM C07F0007-18

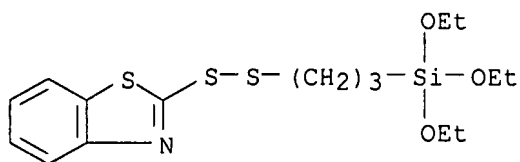
CC 39-9 (Synthetic Elastomers and Natural Rubber)  
Section cross-reference(s): 29

IT **173176-00-6P**, 1-(2-Benzothiazolyl)-2-[3-(triethoxysilyl)propyl] disulfide  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(organosilane polysulfide-oxygen-containing acid mixts. for coupling agents for rubbers containing white fillers)

IT **173176-00-6P**, 1-(2-Benzothiazolyl)-2-[3-(triethoxysilyl)propyl] disulfide  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(organosilane polysulfide-oxygen-containing acid mixts. for coupling agents for rubbers containing white fillers)

RN 173176-00-6 HCAPLUS

CN Benzothiazole, 2-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	1986	010	C-349	PATENT ABSTRACTS OF	
Anon	2001	2000		PATENT ABSTRACTS OF	
Bridgestone Kk	1986			JP 61004742 A	HCAPLUS
Cohen, M	1997			US 5684172 A	HCAPLUS
Goodyear Tire & Rubber	1997			EP 0785206 A	HCAPLUS
Goodyear Tire & Rubber	1997			EP 0785207 A	HCAPLUS
Goodyear Tire & Rubber	1997			EP 0794221 A	HCAPLUS
Goodyear Tire & Rubber	1998			EP 0816420 A	HCAPLUS
Goodyear Tire & Rubber	2002			EP 1226982 A	HCAPLUS
Hamada, T	1996			US 5496883 A	HCAPLUS
Hermann-Josef, W	1996			US 5569721 A	HCAPLUS
Takeshita, M	1989			US 4820751 A	HCAPLUS
Yokohama Rubber Co Ltd	2000			JP 2000351852 A	HCAPLUS

L110 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:511410 HCAPLUS

DN 139:86559

TI Rubber composition for tires containing a coupling agent with polythiosulfenamide function

IN Araujo Da Silva, Jose Carlos; Blanchard, Christiane;  
Mignani, Gerard; Pagano, Salvatore; Tardivat,  
Jean-claude

PA Societe De Technologie Michelin, Fr.; Michelin Recherche Et  
Technique S.A.

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003054075	A1	20030703	WO 2002-EP14522	20021219
	WO 2003054075	A8	20050217		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
	PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,				
	UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
	FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,				
	CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002362161	A1	20030709	AU 2002-362161	20021219
	EP 1474475	A1	20041110	EP 2002-796682	20021219
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	CN 1606593	A	20050413	CN 2002-825736	20021219
	JP 2005536575	T	20051202	JP 2003-554786	20021219
	US 2005032949	A1	20050210	US 2004-870999	20040621
PRAI	FR 2001-16853	A	20011220		
	WO 2002-EP14522	W	20021219		

OS MARPAT 139:86559

AB The invention concerns an elastomeric composition for making tires, based on at least (i) a diene elastomer, (ii) an inorg. filler as reinforcing filler and (iii), as coupling agent (inorg. filler/diene elastomer), an organosilicon compound at least bifunctional capable of being grafted on the elastomer by means of a sulfur group with polythiosulfenamide function, of formula: SiAS<sub>x</sub>NR<sub>1</sub>R<sub>2</sub>, wherein: A is a linear or branched, divalent binding group, enabling to bind the polythiosulfenamide group to a silicon atom of the organosilicon compound; x is an integer or fractional number between 2 and 4; R<sub>1</sub> represents hydrogen or a monovalent hydrocarbon group; R<sub>2</sub> represents a monovalent hydrocarbon group selected among linear or branched C<sub>3</sub>-C<sub>8</sub> alkyl radicals, C<sub>5</sub>-C<sub>10</sub> cycloalkyl radicals, C<sub>6</sub>-C<sub>18</sub> aryl radicals and (C<sub>6</sub>-C<sub>18</sub>)aryl-(C<sub>1</sub>-C<sub>8</sub>) alkyl radicals; R<sub>1</sub> and R<sub>2</sub> may together with the nitrogen atom whereto they are bound form a single hydrocarbon ring. A typical coupling agent was manufactured by passing Cl(g) through 350 mL CH<sub>3</sub>Cl containing 0.1 mol phthalimide disulfide (I) until solubilization of I was complete, adding 0.21 mol (iso-Pr)<sub>2</sub>NH in 50 mL CH<sub>3</sub>Cl dropwise to 350 mL CH<sub>3</sub>Cl containing 0.1 mol resulting phthalimidodisulfenyl chloride, stirring 3 h, adding 45 mmol [HS(CH<sub>2</sub>)<sub>3</sub>]Si(OMe)<sub>3</sub> in C<sub>6</sub>H<sub>6</sub> to 250 mL C<sub>6</sub>H<sub>6</sub> containing 50 mmol resulting N-(diisopropylaminosulfanyl)phthalimide, and stirring 48 h.

IC ICM C08K0005-548

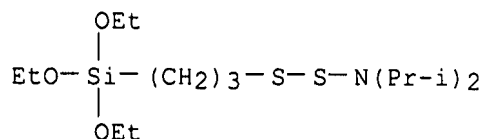
ICS C08L0021-00; B60C0001-00

CC 39-13 (Synthetic Elastomers and Natural Rubber)

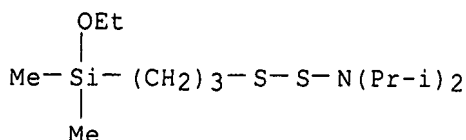
IT 548478-08-6P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]diisopropylamine 554434-57-0P, N-[[3-(Dimethylethoxysilyl)propyl]disulfanyl]diisopropylamine 554434-58-1P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]diethylamine

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (rubber compns. for tires containing inorg. fillers and silane coupling

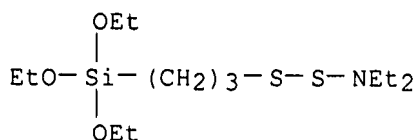
- agents with polythiosulfenamide function)
- IT 548478-07-5P, N-[[3-(Trimethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-10-0P, N-Methyl-N-[[3-(triethoxysilyl)propyl]disulfanyl]cyclohexylamine 548478-11-1P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]benzylamine 548478-12-2P, N-Methyl-N-benzyl[3-(trimethoxysilyl)propyl]dithiosulfenamide 554434-55-8P
- RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(rubber compns. for tires containing inorg. fillers and silane coupling agents with polythiosulfenamide function)
- IT 548478-08-6P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]diisopropylamine 554434-57-0P, N-[[3-(Dimethylethoxysilyl)propyl]disulfanyl]diisopropylamine 554434-58-1P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]diethylamine
- RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(rubber compns. for tires containing inorg. fillers and silane coupling agents with polythiosulfenamide function)
- RN 548478-08-6 HCAPLUS
- CN 2-Propanamine, N-(1-methylethyl)-N-[[3-(triethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



- RN 554434-57-0 HCAPLUS
- CN Amidothiosulfoxylic acid, bis(1-methylethyl)-, 3-(ethoxydimethylsilyl)propyl ester (9CI) (CA INDEX NAME)



- RN 554434-58-1 HCAPLUS
- CN Amidothiosulfoxylic acid, diethyl-, 3-(triethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



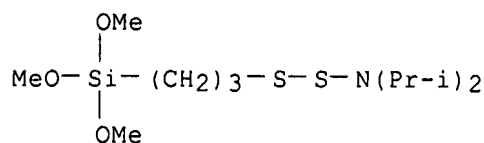
- IT 548478-07-5P, N-[[3-(Trimethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-10-0P, N-Methyl-N-[[3-(triethoxysilyl)propyl]disulfanyl]cyclohexylamine 548478-11-1P, N-[[3-(Triethoxysilyl)propyl]disulfanyl]benzylamine 548478-12-2P, N-Methyl-N-benzyl[3-(trimethoxysilyl)propyl]dithiosulfenamide

## 554434-55-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (rubber compns. for tires containing inorg. fillers and silane coupling agents with polythiosulfenamide function)

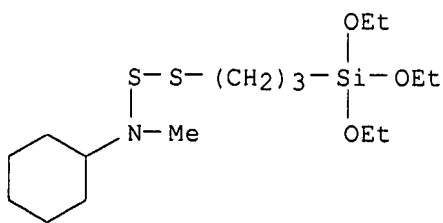
RN 548478-07-5 HCAPLUS

CN 2-Propanamine, N-(1-methylethyl)-N-[[3-(trimethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



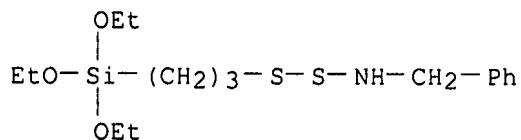
RN 548478-10-0 HCAPLUS

CN Cyclohexanamine, N-methyl-N-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



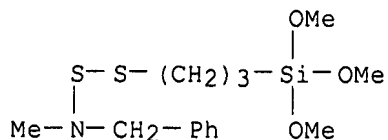
RN 548478-11-1 HCAPLUS

CN Benzenemethanamine, N-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



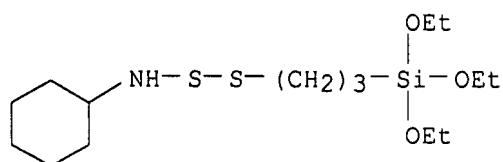
RN 548478-12-2 HCAPLUS

CN Amidothiosulfoxylic acid, methyl(phenylmethyl)-, 3-(trimethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



RN 554434-55-8 HCAPLUS

CN Amidothiosulfoxylic acid, cyclohexyl-, 3-(triethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bayer Ag	2000			EP 1063259 A	HCAPLUS
Goodyear Tire & Rubber	1999			EP 0939081 A	HCAPLUS
Goodyear Tire & Rubber	1999			EP 0945456 A	HCAPLUS
Phillips Petroleum Co	1983			EP 0074632 A	HCAPLUS

L110 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:492194 HCAPLUS

DN 139:54164

TI Organosilicon compounds useful especially as coupling agents, elastomeric compositions containing them, and elastomeric articles prepared from such compositions

IN Guennouni, Nathalie; Kirsch, Gilbert; Mignani, Gerard;  
Stelandre, Laurence

PA Rhodia Chimie, Fr.

SO Fr. Demande, 45 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

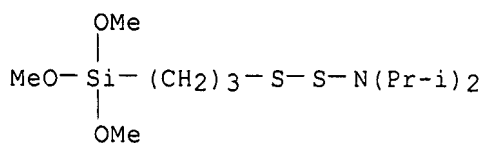
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2833958	A1	20030627	FR 2001-16507	20011220
	FR 2833958	B1	20050819		
	WO 2003053983	A1	20030703	WO 2002-FR4451	20021219
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002364856	A1	20030709	AU 2002-364856	20021219
	EP 1456215	A1	20040915	EP 2002-801153	20021219
	EP 1456215	B1	20060809		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	AT 335751	T	20060915	AT 2002-801153	20021219
PRAI	FR 2001-16507	A	20011220		
	WO 2002-FR4451	W	20021219		

OS MARPAT 139:54164

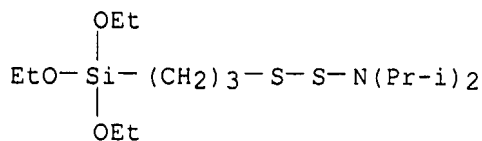
AB Silanes having OH or monovalent hydrolyzable groups and R1SxNR2R3 groups (R1 = divalent organic, R2, R3 = monovalent organic, x = 2-4) such as (MeO)3Si(CH2)3SSN(CHMe2)2 are useful for coupling agents in diene rubbers containing reinforcing white fillers. When x = 2, these compds. are manufactured

by reaction of the corresponding halo-, (substituted) succinimido, or (substituted) phthalimidodisulfanylsilanes with the corresponding amines or by reaction of the corresponding mercapto silanes with (substituted) succinimido- or (substituted) phthalimidothioamines. When  $x = 3$ , these compds. are manufactured by reaction of the corresponding halotrisulfanyl silanes with the corresponding amines. When  $x = 4$ , these compds. are manufactured by reaction of the corresponding halotri- or disulfanyl silanes with the appropriate amount of S, and reaction of the halotetrasulfanyl intermediate with the corresponding amine.

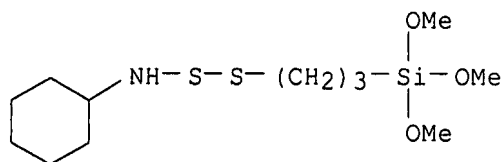
IC ICM C07F0007-18  
ICS C08L0009-06; C08K0009-06; C08K0003-36; C08K0005-548; C08J0003-24  
CC 39-9 (Synthetic Elastomers and Natural Rubber)  
Section cross-reference(s): 23, 25  
IT 548478-07-5P, N-[(3-Trimethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-08-6P, N-[(3-Triethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-09-7P, N-[(3-Trimethoxysilyl)propyl]disulfanyl]cyclohexylamine 548478-10-0P 548478-11-1P, N-[(3-Triethoxysilyl)propyl]disulfanyl]benzylamine 548478-12-2P, N-Methyl-N-[(3-trimethoxysilyl)propyl]disulfanyl]benzylamine  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(organosilicon compds. containing polythiosulfenamide groups for coupling agents for diene rubbers containing white fillers)  
IT 548478-07-5P, N-[(3-Trimethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-08-6P, N-[(3-Triethoxysilyl)propyl]disulfanyl]diisopropylamine 548478-09-7P, N-[(3-Trimethoxysilyl)propyl]disulfanyl]cyclohexylamine 548478-10-0P 548478-11-1P, N-[(3-Triethoxysilyl)propyl]disulfanyl]benzylamine 548478-12-2P, N-Methyl-N-[(3-trimethoxysilyl)propyl]disulfanyl]benzylamine  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(organosilicon compds. containing polythiosulfenamide groups for coupling agents for diene rubbers containing white fillers)  
RN 548478-07-5 HCAPLUS  
CN 2-Propanamine, N-(1-methylethyl)-N-[[3-(trimethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



RN 548478-08-6 HCAPLUS  
CN 2-Propanamine, N-(1-methylethyl)-N-[[3-(triethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)

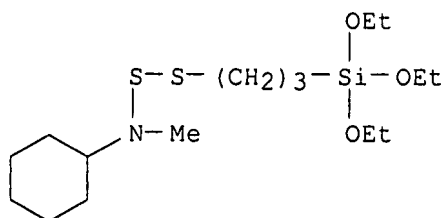


RN 548478-09-7 HCAPLUS  
CN Cyclohexanamine, N-[[3-(trimethoxysilyl)propyl]dithio]-(9CI) (CA INDEX NAME)



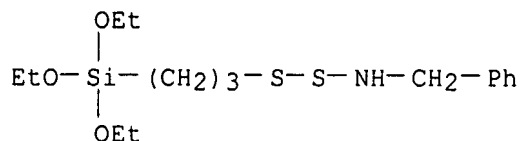
RN 548478-10-0 HCAPLUS

CN Cyclohexanamine, N-methyl-N-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



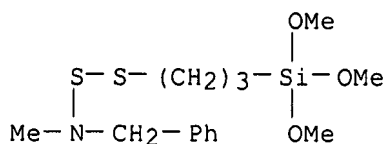
RN 548478-11-1 HCAPLUS

CN Benzenemethanamine, N-[[3-(triethoxysilyl)propyl]dithio]- (9CI) (CA INDEX NAME)



RN 548478-12-2 HCAPLUS

CN Amidothiosulfoxylic acid, methyl(phenylmethyl)-, 3-(trimethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Deutsche Gold- Und Silb	1974			FR 2206330 A	HCAPLUS
Phillips Petroleum Comp	1983			EP 0074632 A	HCAPLUS

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(FILE 'HOME' ENTERED AT 13:27:30 ON 03 MAY 2007)

jan delaval - 3 may 2007



## SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:27:57 ON 03 MAY 2007

L1 1 S US20040181000/PN OR (US2003-733613# OR WO2002-EP6954 OR FR200  
E ARAUJO/AU  
L2 9 S E197,E198  
E ARAUJO J/AU  
E DA SILVA/AU  
L3 2 S E252,E253  
E DASILVA/AU  
E BLANCHARD/AU  
L4 6 S E3  
E BLANCHARD C/AU  
L5 139 S E3-E12,E45  
E MIGNANI/AU  
L6 165 S E12-E14  
E PAGANO/AU  
E PAGANO S/AU  
L7 112 S E3-E6,E8  
E SALAVATORE/AU  
E TARDIVAT/AU  
L8 27 S E4,E6,E7  
E MICHELIN/PA,CS  
L9 556 S E3,E4 OR MICHELIN?/PA,CS  
SEL RN L1

FILE 'REGISTRY' ENTERED AT 13:39:17 ON 03 MAY 2007

L10 16 S E1-E16  
L11 7 S L10 AND (SI AND N AND S)/ELS

FILE 'HCAPLUS' ENTERED AT 13:40:12 ON 03 MAY 2007

L12 435 S L2-L8 NOT L1  
L13 26 S L12 AND (TIRE OR TYRE)  
L14 25 S L12 AND B60C/IPC,IC,ICM,ICS  
L15 47 S L12 AND (?ELASTOMER? OR ?RUBBER?)  
L16 43 S L12 AND (ELASTOMER? OR RUBBER?)/SC,SX  
E RUBBER/CT  
E E3+ALL  
L17 6 S E7  
L18 287189 S E6+NT  
E E57+ALL  
L19 23263 S E1+NT  
L20 45 S L12 AND L17-L19  
L21 48 S L13-L16,L20  
L22 387 S L12 NOT L21

FILE 'HCAPLUS' ENTERED AT 13:42:42 ON 03 MAY 2007

FILE 'REGISTRY' ENTERED AT 13:42:55 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:42:56 ON 03 MAY 2007

L23 TRA L21 1- RN : 302 TERMS

FILE 'REGISTRY' ENTERED AT 13:42:56 ON 03 MAY 2007

L24 302 SEA L23  
L25 17 S L24 AND (SI AND N AND S)/ELS

FILE 'HCAPLUS' ENTERED AT 13:43:29 ON 03 MAY 2007

L26 TRA L22 1- RN : 1885 TERMS

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FILE 'REGISTRY' ENTERED AT 13:43:39 ON 03 MAY 2007
L27      1885 SEA L26
L28      10 S L27 AND (SI AND N AND S)/ELS

FILE 'HCAPLUS' ENTERED AT 13:44:07 ON 03 MAY 2007
L29      528 S L9 NOT L1,L21,L22

FILE 'REGISTRY' ENTERED AT 13:44:10 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:44:13 ON 03 MAY 2007
L30      TRA L29 1- RN :      849 TERMS

FILE 'REGISTRY' ENTERED AT 13:44:26 ON 03 MAY 2007
L31      849 SEA L30
L32      2 S L31 AND (SI AND N AND S)/ELS
L33      29 S L11,L25,L28,L32
L34      9 S L33 AND SI>=2
L35      6 S L34 NOT (C25H49NO9S2SI2 OR C18H20N2SSI2 OR C20H41NO7S2SI2)
L36      20 S L33 NOT L34
L37      19 S L36 NOT AYS/CI
L38      1 S L11 NOT L35
L39      10 S L25 NOT L10
L40      11 S L38,L39
L41      57696 S (SI AND S AND N)/ELS
L42      STR
L43      3 S L42 SAM SUB=L41
L44      49 S L42 FUL SUB=L41
          SAV L44 RONESI733/A
L45      34 S L44 NOT L35,L40
L46      11 S L45 AND SI>=2
L47      51 S L35,L40,L44
L48      2 S L47 NOT L44

FILE 'HCAPLUS' ENTERED AT 13:54:58 ON 03 MAY 2007
L49      39 S L47 OR L48
L50      6 S L49 AND L1-L9
          E BLANCHARD C/AU
L51      155 S E3-E12,E42-E48,E52
L52      3 S L49 AND L51
L53      6 S L50,L52
L54      21 S L49 AND PY<=2001 NOT P/DT
L55      12 S L49 AND (PD<=20010628 OR PRD<=20010628 OR AD<=20010628) AND P
L56      33 S L54,L55
L57      8 S L56 AND L17-L19
L58      6 S L56 AND B60C/IPC,IC,ICM,ICS
          E TIRE/CT
L59      21242 S E5-E21
L60      23263 S E5+OLD,NT OR E9+OLD,NT
          E E5+ALL
          E E4+ALL
L61      23263 S E1 OR E3+OLD,NT OR E4+OLD,NT
          E E5+ALL
L62      287194 S E6+OLD,NT
          E E30+ALL
          E E8+OLD
L63      9822 S E1,E2
          E E1+ALL
L64      20319 S E358+OLD,NT
L65      8 S L56 AND L59-L64
L66      368610 S (RUBBER? OR ELASTOMER?)/CW,CT

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L67 9822 E BUTADIENE/CT  
S E11+OLD,NT  
E BUTADIENE RUBBERS/CT  
E BUTADIENE RUBBER,/CT  
L68 9678 S E4-E12  
E STYRENE-BUTADIENE RUBBER/CT  
L69 20319 S E3+OLD  
L70 20187 S E3+NT  
E STYRENE-BUTADIENE RUBBER,/CT  
L71 20115 S E4-E12  
L72 8 S L56 AND L66-L71  
L73 8 S L56 AND (RUBBER? OR ELASTOM?)/SC,SX,CW,CT  
L74 10 S L56 AND (?RUBBER? OR ?ELASTOM?)  
L75 6 S L56 AND (TIRE OR TYRE)  
L76 10 S L1,L57,L58,L65,L72-L75  
L77 5 S L76 AND COUPLING?/CW,CT  
E COUPLING/CT  
L78 5 S L76 AND E5+OLD,NT  
L79 6 S L76 AND COUPL?  
L80 10 S L76-L79  
L81 10 S L80 AND L1-L9,L12-L22,L49-L80  
L82 23 S L56 NOT L81

FILE 'REGISTRY' ENTERED AT 14:09:16 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 14:09:16 ON 03 MAY 2007

L83 TRA L81 1- RN : 265 TERMS

FILE 'REGISTRY' ENTERED AT 14:09:16 ON 03 MAY 2007

L84 265 SEA L83  
L85 8 S L84 AND L47,L48  
L86 83 S L84 AND L41 NOT L85

FILE 'HCAPLUS' ENTERED AT 14:11:27 ON 03 MAY 2007

L87 TRA L82 1- RN : 241 TERMS

FILE 'REGISTRY' ENTERED AT 14:11:27 ON 03 MAY 2007

L88 241 SEA L87  
L89 31 S L88 AND L47,L48  
L90 1 S L89 AND C6H20N2O6S2SI2  
L91 1 S L89 AND C24H54F2N2S2SI2  
L92 1 S L89 AND C24H54F2N2S3SI2  
L93 3 S L90-L92

FILE 'HCAPLUS' ENTERED AT 14:14:54 ON 03 MAY 2007

L94 4 S L93  
L95 4 S L94 AND PY<=2001 NOT P/DT  
L96 13 S L81,L85  
L97 0 S L85 NOT L96

FILE 'REGISTRY' ENTERED AT 14:15:50 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 14:16:08 ON 03 MAY 2007

SEL HIT RN L81

FILE 'REGISTRY' ENTERED AT 14:18:05 ON 03 MAY 2007

L98 8 S E1-E8  
L99 7 S L98 NOT NCSC2-C6/ES  
L100 6 S L99 NOT NC4-C6/ES

FILE 'HCAPLUS' ENTERED AT 14:18:41 ON 03 MAY 2007

L101 2 S L100  
L102 4 S L95  
L103 2 S L101,L102 AND L1-L9,L51  
L104 1 S L101,L102 AND B60C/IPC,IC,ICM,ICS  
L105 1 S L101,L102 AND (TYRE OR TIRE)  
L106 2 S L101,L102 AND (ELASTOM? OR RUBBER?)/SC,SX,CW,CT,BI  
L107 2 S L101,L102 AND (?ELASTOM? OR ?RUBBER?)  
L108 2 S L101,L102 AND L59-L64,L66-L71  
L109 6 S L101-L108

FILE 'REGISTRY' ENTERED AT 14:23:02 ON 03 MAY 2007

FILE 'HCAPLUS' ENTERED AT 14:23:11 ON 03 MAY 2007

L110 4 S L53 NOT L109

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